



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,934	04/16/2004	Rudiger Musch	PO8034/LcA 36,711	9010
34947 7590 12/08/2009 LANXESS CORPORATION 111 RIDC PARK WEST DRIVE PITTSBURGH, PA 15275-1112				
EXAMINER				
MULCAHY, PETER D				
ART UNIT		PAPER NUMBER		
1796				
MAIL DATE		DELIVERY MODE		
12/08/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/825,934

**Applicant(s)**

MUSCH ET AL.

**Examiner**

Peter D. Mulcahy

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 September 2009.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3 and 5-25 is/are pending in the application.  
4a) Of the above claim(s) 8-25 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3 and 5-7 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO/SB-08)  
Paper No(s)/Mail Date 7/23/09  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Information Disclosure Statement***

The IDS filed 7/23/09 has been considered as indicated on the 1449 attached hereto. Reference AO, the second listing of JP2003-55409, has been crossed through. The English equivalent, EP 451 998, has been properly cited on the 892 attached hereto.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claim language "significant" is indefinite. This is a relative term and is undefined in the specification. Further, example 3 which is based on dispersion D, and is an inventive example, reports an initial pH of 12.8 and a pH after heat aging of 9.6. This is a drop in pH of 3.2. This would appear to be a "significant" drop in pH. As such it is unclear as to how this term further limits the claim.

The claims are further unclear in the reference to "storing" and "storage." Claim 1 step b) recites "subsequently storing the dispersion" and further "drop in pH after storage." The claims are indefinite in that one cannot ascertain if the "storing" and "storage" are to be one in the same or two different steps. The record would support the interpretation as these being different steps and/or time periods. Step b) in the

claim equates to a heat aging step as taught in the art. This step is complete at the point at which the change in gel content is obtained. The "after storage" time period is understood to be subsequent to the heat aging step b) and prior to end use.

Clarification is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3 and 5-7 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Youker US 3,639,301 or EP 451 998 or JP 2001-049043.

Applicant's claim 1 recites an "aqueous polymer dispersion, obtained by

a) preparing an aqueous polychloroprene dispersion with a gel content of 0.1 wt.% - 30 wt.%, based on the polymer, prepared by polymerization of chloroprene in an aqueous emulsion at 10°C - 25°C and at pH value of 10-14 and, optionally, ethylenically unsaturated monomers which can be copolymerized with chloroprene and

b) subsequently storing the dispersion at temperatures of from 50°C - 110°C until the gel content has risen by at least 10 wt.% to 1 - 60 wt.%, based on the polymer, wherein the aqueous polymer dispersion does not have a significant drop in pH after storage.”

The claim is clearly a “product-by-process” type claim. It is well established that “product-by-process” claims are limited to the resultant product and not the process limitations. In the instant case the claimed product is an aqueous chloroprene dispersion having a gel content of 1-60 wt%, wherein the aqueous polymer dispersion does not have a significant drop in pH after storage. The process limitations of the polymerization temperatures and pH and the heat aging step b) of “storing the dispersion at temperatures of from 50°C - 110°C until the gel content has risen by at least 10 wt. % to 1 - 60 wt.%, based on the polymer” are not seen to patentably distinguish the claimed dispersion from any aqueous polychloroprene dispersion having a gel content of 1-60 wt%, wherein the aqueous polymer dispersion does not have a significant drop in pH after storage.

Turning to the art relied upon in rejecting the claims under 35 USC 102/103:

Youker is relied on for the same reasons that have been advanced in previous office actions rejecting claims over this art. Applicant's arguments have been fully considered but have been found not persuasive. While it is acknowledged that the solids content is not the same as the gel content, the fact remains that the product produced therein anticipates and/or renders obvious the claimed dispersion. Rejections under 35 USC 102/103 are appropriate when the reference discloses all the limitations

of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as in *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980). See MPEP § § 2112-2112.02. Youker prepares the chloroprene dispersion following the procedure shown in *Wilder* US 2,405,724. This patent polymerizes at 40°C. This is compared to the claimed process limitation of 25°C. The pH at polymerization is reported as being 12.3 in column 3 lines 16 and 20. The pH is lowered by the heat aging but the pH does not have a "significant" drop in pH after storage, see column 2 lines 39-50. Here the stability is discussed. It is understood that the gel content is low given the teaching that the latex will not be in danger of gelation prior to its intended use. It is reasonable to presume that the product in the art necessarily possesses properties that anticipate and/or render obvious the claimed product.

Applicant's arguments have been fully considered but have been found not persuasive. Applicant advances experimental data and alleges that the data supports the patentable distinctions between the claims and the art. This is not persuasive. Experimental data must be presented in an affidavit or declaration. As such, any conclusions drawn from the instant showing are considered moot.

The fact that Youker intends to use the chloroprene dispersion in foams is not germane to the patentability of the instant claims. The claimed product is a dispersion. The intended utility of the dispersion does not limit this product.

EP 451 998 shows polychloroprene dispersions having the gel content as claimed. The dispersion has a stable pH after storage. Page 2 lines 54-58 states that the latex is stable and there is no build-up of HCl. The lack of HCl is understood to mean that the pH remains stable. The fact that the art teaches polymerizing at a slightly higher temperature, 30°C -55°C page 4 line 23, and lower pH is not relevant to the patentability of the instant claims. The art arrives at a patentably indistinguishable product from that claimed, albeit by a different process.

JP 2001-049043, machine translation provided, teaches stable polychloroprene dispersions having the claimed gel content, see [0012]. The polymerization temperature appears to be lower than 30°C, [0008]. The examples report the polymerization pH between 8.8 and 9.1. There is no teaching as to the pH dropping after storage. As such, it is reasonable to presume that the pH remains stable after storage. This product is not patentably distinguishable from the claimed product and is either anticipated or obvious.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter D. Mulcahy whose telephone number is 571-272-1107. The examiner can normally be reached on Mon.-Fri. 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu can be reached on 571-272-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter D. Mulcahy/  
Primary Examiner, Art Unit 1796